

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 5, 2025

TO: Technical Director
FROM: Lawrence Livermore National Laboratory (LLNL) Cognizant Engineer
SUBJECT: LLNL Report for August 2025

Defense Nuclear Facilities Safety Board (Board) Staff Interactions: From August 4 to 7, 2025, members of the Board's staff were on site to observe the Fiscal Year (FY) 2025 annual emergency exercise. From August 18 to 19, 2025, a member of the Board's staff was on site to observe the FY 2025 Waste Storage Facilities Area 625 Exercise. From August 25 to 27, 2025, a Board staff review team was on site to review the effectiveness of safety culture improvement corrective actions at LLNL.

Fiscal Year (FY) 2025 Annual Emergency Exercise: On August 7, 2025, Lawrence Livermore National Security, LLP (LLNS) staff conducted their annual emergency exercise.

The exercise involved an attack on the Building 131 high bay by a drone with an explosive charge, resulting in an operational emergency. For this exercise, participation by emergency exercise responders started at the first shift change, which was approximately ten hours after the initial explosion. During the period after the attack but before the exercise started, the exercise simulated security personnel responding to the scene and discovering the damage. The security incident command secured the area, implemented an evacuation of Building 131, and issued a stay-indoors protective action for the remainder of the site. The exercise included participation by a Federal Bureau of Investigation (FBI) crisis management team with 15 to 20 personnel consisting of a team manager, special agents, crime scene investigators, explosives experts, and public affairs specialists. The FBI team investigated the explosion in conjunction with the emergency response activities. LLNS staff members are completing an after-action report for the exercise.

Evaluation of the Safety of the Situation (ESS) Conditions of Approval (COA) for the Plutonium Facility Emergency Diesel Generator Fuel Tanks: On August 7, 2025, LLNS provided page changes for the Building 332 Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR) to address the COAs associated with the emergency diesel generator fuel tanks (see LLNL Monthly Report for [July 2025](#)). The DSA page changes designated the fuel level monitoring system as defense-in-depth/equipment important to safety and noted that "generator runtime is not a separate requirement; only the level of the fuel tank is measured." The TSR page changes incorporated generator runtime calculations by changing the Limiting Condition of Operation action statement. The TSR revisions change the frequency of performance of diesel fuel level surveillance requirements from monthly to weekly. LFO is evaluating the proposed page changes.

Building 331 - Tritium Delivery System (TDS) DSA and TSR Page Changes Approval: On August 26, 2025, LFO approved the DSA and TSR page changes for the TDS in Building 331, with two COAs. The first COA requires LLNS to immediately correct inconsistencies between the DSA and TSR, more clearly define the workstations in the TDS, and correct typographical errors. The second COA requires LLNS to update hazard tables and justify stop-work and evacuation of workers in certain hazard scenarios in the 2026 annual update to the Building 331 DSA and TSR.